DOCUMENT RESUME

ED 445 481 EF 005 410

AUTHOR	Layzell, Julie; Rogers, Nicola; Flatt, Graham
TITLE	A Legacy of Us: Maintaining & Managing Your School Grounds [with Videotape].
INSTITUTION	Learning through Landscapes Trust, Winchester (England).; Hampshire County Council, Winchester (England).
ISBN	ISBN-1-85975-099-0
PUB DATE	1996-00-00
NOTE	43p.; Videotape not available from ERIC.
AVAILABLE FROM	The Green Brick Road, 429 Danforth Ave., Ste. 408, Toronto, ON, Canada M4K 1P1; Tel: 800-473-3638 (Toll Free).
PUB TYPE	Guides - Non-Classroom (055)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Elementary Secondary Education; Foreign Countries; Guidelines; Public Schools; *School Maintenance
IDENTIFIERS	England; *School Yards

ABSTRACT

This manual and videotape provides guidance on establishing effective school ground maintenance and management practices that link the grounds development phases with appropriate management. The video provides an overview of the key issues by showing approaches adopted by five different schools, and the manual explores these issues in greater detail offering additional outline information on the practice of maintenance and management of school grounds as well as a resource directory of organizations and contacts who can give support to schools. (Contains 24 references.) (GR)

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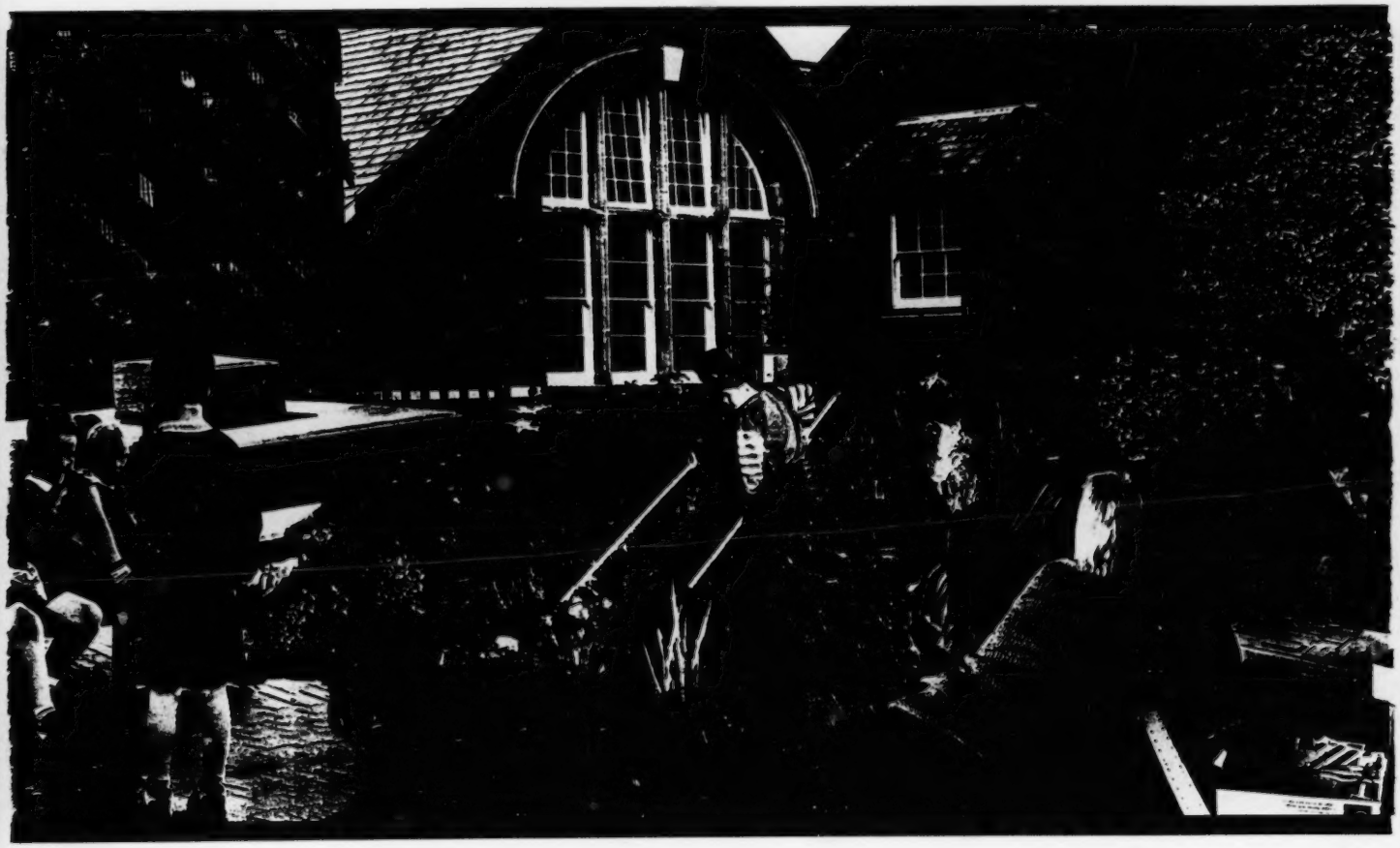
Maintaining & Managing
your school grounds



Learning through LANDSCAPES

Hampshire COUNTY COUNCIL

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Landscape elements:
- Trees and shrubs
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- Herbaceous plants and bulbs
- Boundaries
- Ponds
- Site furniture
- Hard surfaces
- Ground markings
- Murals

7 Organisations & References

Acknowledgements: This manual has been written and prepared by Julie Layzell, Nicola Rogers and Graham Flatt of Hampshire County Council Schools Landscape Project.
Design and Illustrations by The Central Graphics Unit, Hampshire County Council.

Distributed by Southgate Publishers C/O Biblios Pds Ltd. Star Road, Partridge Green, West Sussex, RH13 8LD.
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Introduction

Projects which focus on the enrichment and development of the school grounds are now very common in schools. The rush to develop 'outdoor classrooms' and to enrich the school landscape is understandable given the often bleak and windswept nature of the land surrounding school buildings.

However, development is only a part of the story. Maintenance and management is essential, and an ongoing responsibility. Establishing effective maintenance and management practice is possible in all schools, but it is particularly important in schools where development has taken place. Maintenance and management is the key to securing the school's initial investment of time, money and enthusiasm, ensuring effective strategies are in place which link development phases with appropriate management. Readers who have gone through the process of developing their school grounds will see parallels with the processes described later in this manual.

Schools who have not been through the development process can also benefit from more effective landscape maintenance and management. So, whether a school is considering maintenance and management in the wake of a grounds development project or is aiming to adopt a more creative approach to the care of the existing grounds, this manual, 'Maintaining and Managing Your School Grounds - A Legacy of Us' together with the accompanying video, provides a valuable resource for guiding those involved.

The video and manual have been produced by the Schools Landscape Project of Hampshire County Council, for use by headteachers, governors and all those involved in school grounds. It was recognised that the management of school grounds has been a neglected area in terms of supporting resources and that schools would benefit from more guidance.

These two resources are closely linked. The video aims to provide an overview of the key issues by showing approaches adopted by five different schools. The manual explores these issues in greater detail providing additional outline information on the practice of maintenance and management of school grounds as well as a resource directory of organisations and contacts who can give support to schools.

Landscape Management: is a long-term process concerned with the planning and stewardship of school grounds and the policies and organisation of site use, development and maintenance

Landscape Maintenance: is the day-to-day care of all aspects of the school grounds to an agreed standard and in an agreed way. This work, and its organisation are only a part of the larger task of school grounds management.

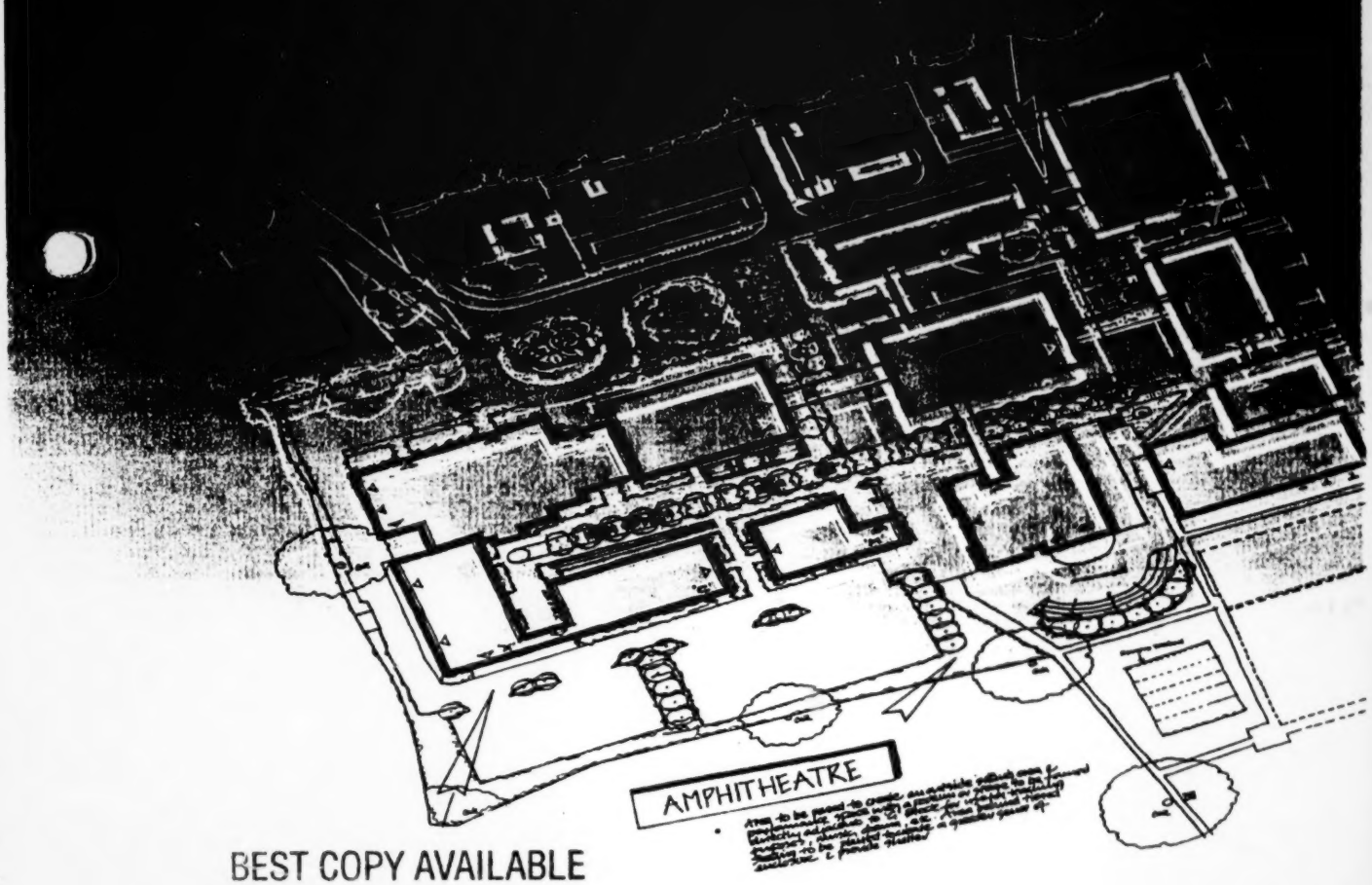
The maintenance and management of school grounds should not be viewed in isolation but needs to form an integral part of the general culture and philosophy of every school. The School Development Plan should contain a broad strategy and policy statement for the grounds to formalise your commitment and to give the issue status. The importance of the grounds then becomes part of the school's culture. There is a great deal to be gained from this holistic approach in terms of:

- creating an effective and useful learning resource;
- contributing towards a successful OFSTED inspection;
- establishing a more sustainable stewardship of the land;
- improving the image of the school; and
- involving pupils and the school community in looking after the grounds.

1

The Landscape

Management Plan



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The Landscape Management Plan

The first step to achieving successful grounds management is the preparation of a Landscape Management Plan. There is a clear process to follow that will help you, which is similar to the process of producing a School Development Plan. The following diagram broadly defines the stages that you will need to go through to produce your Landscape Management Plan and to enable you to effectively plan ahead.

Each stage of this process is considered in turn in this manual. Firstly though, what is a Landscape Management Plan and what does it look like?

A Landscape Management Plan is a flexible working document specific to a site which realistically sets out a framework and programme for dealing with the landscape maintenance and management tasks and operations. It is a key organisational tool which deals specifically with the stewardship of your school grounds and with the organisation of what needs to be done, where, when and by whom.

A Landscape Management Plan should not be confused with a 'School Development Plan' or a 'Landscape Master Plan'.

A School Development Plan, a document you will be familiar with, is a broad document relating to the strategy and policies of the whole school in relation to curriculum, future staff requirements etc. The Landscape Management Plan will contribute towards the School Development Plan in terms of policies relating to the stewardship of the grounds as well as the use of the grounds.

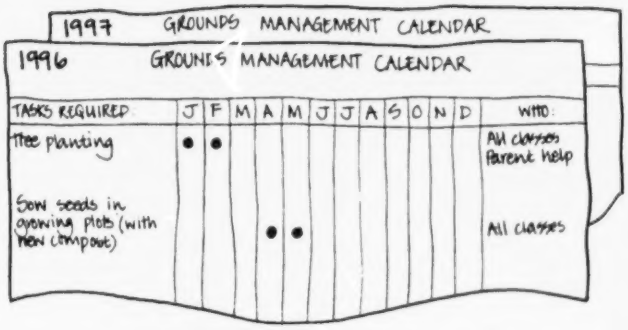
A Landscape Master Plan outlines new grounds development and usually involves fundamental alterations and additions. There is however a degree of overlap between these and Management Plans when both developmental and management issues are considered together.

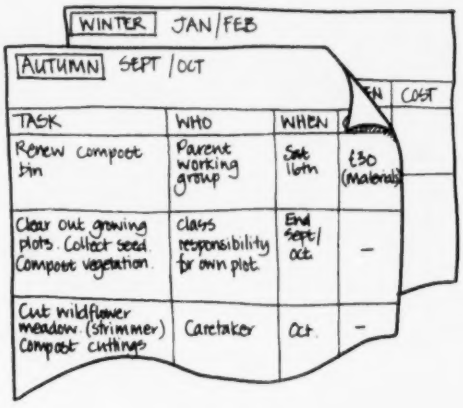
The Landscape Management Plan

As with the School Development Plan, the Landscape Management Plan will be a document that evolves and changes. It is a product of a complex, ongoing process that should be periodically reviewed. It is therefore important to keep records and monitor progress to enable you to assess whether your grounds maintenance and management is successfully achieving the objectives you set.

The process of producing the Landscape Management Plan is just as important as the plan itself and is an opportunity to involve others from the outset: teachers, parents, governors and pupils, to share the responsibility and decision making and to give the issue status.

The format of a Landscape Management Plan is very flexible. You should decide what format suits you best, but it usually incorporates a written statement, a drawn plan and a timetable or calendar of tasks. The timetable or calendar enables identifying and programming the short-term maintenance tasks and long-term management goals well in advance.


1997 GROUNDS MANAGEMENT CALENDAR
1996 GROUNDS MANAGEMENT CALENDAR
TASKS REQUIRED
J F M A M J J A S O N D
WHO:
Tree planting
All classes Parent help
Sow seeds in growing plots (with new compost)
All classes



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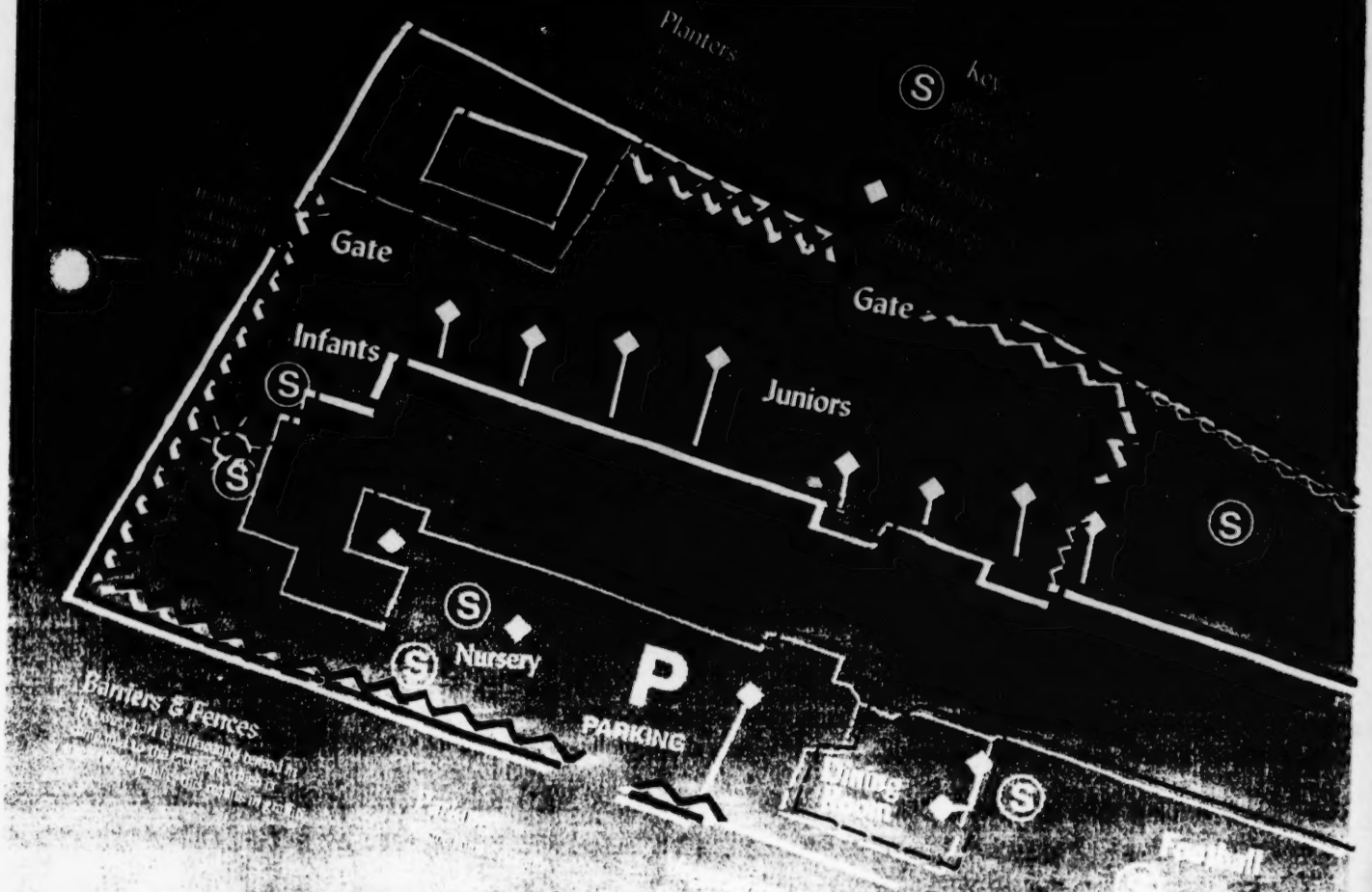
2

Reviewing your Grounds



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Reviewing your Grounds

As illustrated in Section 1, the first stage of the process towards developing your own Landscape Management Plan is reviewing your existing grounds. The most effective way of doing this is by undertaking an audit. This will enable you to gather important information about your grounds, including the way they are maintained and managed at present, which will help steer your future decision making. It is important to consult at an early stage with the school and wider community and the audit will enable you to do this. Some of the audit is ideally suited to survey work undertaken by children as part of curriculum activities.

A grounds audit

An audit involves careful observation of your existing grounds and has three main elements:

- **Survey**. The gathering of information about the physical and visual character of your grounds, including their use as an informal and formal resource, as well as the current maintenance practice.

- **Consultation**. The consultation with key people and organisations outside the school who may hold critical information about your grounds or be able to give valuable advice, e.g. the Local Education and Planning Authorities, Local Trusts etc.

- **Evaluation**. The evaluation or analysis of the information gathered occurs throughout the process. It involves subjective judgements particularly when identifying problem areas and their causes, as well as assets and what it is that makes them of value. It also involves consideration of the constraints and opportunities imposed by the information gathered during your survey and consultation.

On the following pages is a checklist to help you undertake a basic audit. It is not exhaustive, as each school is unique and there will be particular issues which you will need to identify. The information can be gathered as written, drawn or photographic form. If you do not have a scaled base plan of your school grounds it is useful to obtain one, at a scale of something like 1:500. A plan is likely to be held by your Client Services Organisation see ('Consultation' on page nine) or whoever is running your present grounds maintenance contract. Failing this, plans should be available through another Local Authority department.

References & Organisations

- Community Design for Gwent - Ground Rules, 1994.
- Learning Through Landscapes Trust.
- Wood, J., Lucas, B. and Grace, M:Esso Schoolwatch - Initial Survey, 1992.

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Reviewing your Grounds

SITE SURVEY	EVALUATION
Physical characteristics of the site and its setting Adjoining land use.	Interpretation/significance Impact on grounds, e.g. noise
Historical/archaeological features, e.g. hedgerows, boundary walls, earthworks.	Site history, importance, habitat value, protection.
Boundaries - type, height, location.	Privacy, security, visual and physical impact, condition.
Vegetation - tree species, height, girth, canopy spread.	The contribution the vegetation makes (shelter, shade screening). Condition, suitability.
Other vegetation - e.g., hedgerows, shrub beds and flower borders.	
Climate/microclimate - location of 'cold' or 'hot' spots.	Need for shelter/open aspect, sun/shade.
Wildlife habitats - location, type e.g. bramble patches, pond or meadow.	Need for protection and/or enhancement.
Surfaces - type, location.	Condition, suitability.
Site furniture - e.g. play equipment, litterbins ect.	Condition, safety, suitability.
Land drainage - are there any very wet areas?	Use restricted by bad drainage.
Existing services - above ground and below: electricity, gas, water and telephones.	Constraints, accessibility.
Visual characteristics of the site and its setting Identify character of surrounding landscape e.g. distinctive features, vegetation or materials.	Elements which reinforce/ contribute to local character/local distinctiveness.
Appearance - any derelict or overused areas.	Areas that let the image of the school down.
Views - identify views into or out of the grounds.	Good and bad views. Why? Views to be safeguarded or screened.

Reviewing your Grounds

SITE SURVEY	EVALUATION
Access and circulation Pedestrian, cycle and vehicular entrances and movements around the site/buildings.	**Interpretation/Significance** Congestion, conflicts, safety.
Emergency vehicles.	Clear access.
Congestion on the paths - location of muddy areas.	Need for re-routeing / re-designing of paths or management of circulation.
Any unauthorised access pionts and 'desire lines' across the grounds.	Why is this happening? Need for providing path or managing circulation.
Current maintenance practice Existing contract for grounds - maintenance, what type and length of contract and with whom.	Quality and suitability of maintenance practice.
Identify elements included in the contract.	Do you require additions or omissions to the contract? Comparison with resources.
Cost of current maintenance.	
Elements not in the contract and who does these elements.	Is this working? Could more be done in this way?
Use of grounds as a resource Existing curriculum use - what educational use already occurs, when and where.	Could these uses be increased or improved?
Existing recreational use - what breaktime activities occur, when and where.	Do these occur in the most appropriate places?
The location of busy and quiet places.	Need for defining spaces for different levels of activity.
Current shared use with the community or special events.	Requirements for access, use, etc.
Location of areas 'out of bounds' or difficult to supervise at breaktime.	Need for alterations to site layout or management of pupils.

Reviewing your Grounds

CONSULTATION	EVALUATION
Landlord and / or owner of the site: Ownership - legal position on ownership. If unsure check through Local Authority Education or Estates department.	**Interpretation/Significance.** Will new landscape features affect existing rights of way, easements, established uses, long-term building proposals, listed buildings or structures? Access for maintenance for neighbours.
Boundaries - which boundaries belong to whom and reponsibility for upkeep.	
Local Authority Client Services Organisation: Establish whether the Client Services Organisation or other agency administer the grounds maintenance contract and who is the contact person.	Have you discussed the practicality and cost of any changes you propose?
Local Planning Authority: Information on any development issues, proposals or designations affecting your school, e.g. Tree Preservation Orders (TPOs), Conservation Areas etc.	Constraints. Need for protection or enhancement.
Local Education Authority : Up to date information on current regulations concerning sports provision, safety etc.	Check that any new landscape features do not infringe these requirements.
OTHER SCHOOLS Contact and visit other local schools for approaches/ models of maintenance and management, also schools with similar issues. LTL for national links.	Are they appropriate to your situation?

Reviewing your Grounds

CONSULTATION WITH SPECIALISTS	EVALUATION
An **Arboriculturalist** for advice on existing trees in your grounds.	Health and safety of mature trees.
An **Archaeologist or Conservation Officer** for specialist advice/identification of particular features.	Importance, protection, enhancement and of management of features.
An **Ecologist** for help assessing the existing habitats on your site.	Conservation requirements.
A **Landscape Architect** for advice/assistance with site planning, the preparation of a Master Plan and Management Plan and also detailed design issues.	Opportunities and potential for design improvements.
The **Local Inspection and Advisory Support Service** for information on curriculum benefits of grounds.	Potential for improvement of educational resource.

3

Setting Objectives

RECYCLING AUDIT OF THE SCHOOL

	QUESTIONS TO ASK ABOUT RECYCLING IN THE SCHOOL
SCHOOL GROUNDS	Does the school have a compost heap?
	Are the prunings from shrubs and trees composted?
	Is compost sold or given to local people/parents?
	Are the mowings from the playing fields composted?
	Is peat used anywhere in the school grounds?
IN GENERAL	Are there any signs of recycling in the school?
	Does the classroom have separate bins for different types of waste?
	Do the staffrooms have separate bins for different types of waste?
	Does the school have a proper recycling centre?
	Do the teachers enlist parents' support for recycling?
	Is recycling talked about in lessons and/or assemblies?
	Does the school use recyclable products in new classrooms (e.g. chipboard ir
PAPER	Does the school recycle paper? If so ...
	– Is the paper sorted into different types (e.g. computer paper and oth
	– Do the classroom computer printers use recycled paper?
	– Is the school notepaper recycled paper?
	– school envelopes made from recycled paper?

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Setting Objectives

Having identified the assets and problems, opportunities and constraints in your school grounds you will probably already have started to consider how these can be resolved or enhanced. It is time to start planning a way forward. Setting management objectives enables you to do this and is all about identifying what it is you want to achieve through more effective maintenance and management practice.

However, before setting your objectives it is important to consider three basic principles that are recognised as being central to effective stewardship and use of school grounds.

- **Participation** - the involvement of pupils, with staff, parents, governors, helpers, community groups and other interested parties.
- **An holistic approach** - an overall view of the whole site, whole school and local community and whole curriculum.
- **A sustainable approach** - stewardship and use is a process not a product and the commitment should be long term and needs regular reviewing.

These principles should ideally form a thread, linking all your objectives. The objectives you now go on to set should not only reflect these fundamental principles, but also the concerns and future vision you,as a school community, have for your grounds. The objectives are important and, if incorporated in your School Development Plan, become a public commitment. They will affect the general ethos and outward image of your school. The following five objectives could form the basis of your school grounds philosophy.

- Involving the whole school community.
- Optimising design and development opportunities.
- Creating a rich resource for learning.
- Improving wildlife habitats.
- Thinking globally, acting locally.

A. Involving the whole school community

Involvement of the whole school community in the management of the school grounds will engender a greater sense of ownership and caring towards the school. The grounds are one aspect of the school where everyone can become involved and participation at all stages, from decision-making to undertaking practical tasks in the grounds, can build up a sense of pride in the school. The benefits of grounds improvements and the wider opportunities for use that result, can itself increase the degree of participation of the school community.

The degree of care and custodianship you show towards the grounds and environment around, sends out strong messages to the whole school, and wider community. A caring and responsible attitude and a well-looked after, quality environment can deter those responsible for things such as vandalism, including litter and dog fouling. Likewise, quick, remedial action in the event of any vandalism will make a statement that such anti-social actions are not acceptable.

Ensuring that the process and organisation enables you to maximise the involvement of all people connected with the school is outlined in Section 4, 'Organisation and Responsibilities'.

References & Organisations

• Community Design for Gwent - Ground Rules, 1994.

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Setting Objectives

B. Optimising design and development opportunities

School grounds should not be simply a collection of unrelated elements. It is essential to consider the vegetation, hard surfaces, structures and other features as a whole, and design and development opportunities should reflect this holistic approach. The quality and attractiveness of the grounds relies much on good design.

The outward image presented to visitors is important, but there are dangers in attempting to beautify the site without first examining the broader design issues. For instance, it may be tempting to adopt a garden vision and introduce roses and herbaceous borders but, in the wrong context, these may well fail or be inappropriate. Furthermore, they are also very costly to maintain. There may therefore be value in concentrating such intensive, formal features at the frontage of the school and adopting a less intensive, informal approach elsewhere.

Existing site layout

Most schools have expanded and changed through piecemeal development, often with little or no regard for the grounds. Poor design, and a failure to consider the grounds in the first place, can be the source of ongoing difficulties for maintenance and management. Continually patching up problem areas can be a waste of time and money. It may be, however, that such problems can be resolved by managing the use of the area, i.e. the way the children use the space rather than changing the layout. If this is not practical then it may be better to invest in a total restructuring of the grounds, or part of them, to resolve inherent design problems.

For restructuring of your grounds to resolve these inherent design problems, there may be advantages in employing a Landscape Architect. Careful redesign can have the benefits of increasing the opportunities for using the grounds, improving their appearance, helping to reduce maintenance problems and may also enable cost savings after the initial outlay.

New developments

When considering any development, whether a major new building extension or simply changes to the car park layout, it should be viewed as an opportunity for enhancing the grounds. Your school grounds can also make a positive contribution to the overall landscape character and local distinctiveness in your area.

Briefing the designer, or whoever is responsible for the project, at the early planning stage is essential to ensure the needs and aspirations for the grounds are understood and acted on. The brief should include the consideration of a number of points:

- How do they propose to involve and consult with the children and teachers?
- How do they propose to build in the objectives you have set for your grounds?

Whatever the scale of the scheme there will be implications for the way the site is subsequently used and managed, so make sure any new scheme is well assessed in terms of the impact and contribution to the grounds as a whole. For instance:

- Are the proposals appropriate to the setting and character of the local landscape?
- Has the impact of the proposals on the nature and use of adjoining spaces been considered?
- Are all the materials robust enough for the level of use?
- What additional maintenance and management requirements will the development have and what might their financial implications be?

References & Organisations

- The Landscape Institute.

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Setting Objectives

C. Creating a rich resource for learning

The scope and potential for using the grounds as a learning resource is infinite. When considering the curriculum opportunities, the grounds provide a resource for all aspects of the curriculum, the formal, informal and hidden. The Learning through Landscapes Trust is a good source of information, and publishes a wide range of booklets covering curriculum opportunities. Your Local Education Authority advisors, who have responsibility for grounds, may also be able to give advice and information.

The formal curriculum

It is generally true to say that the greater the variety and interest of the grounds the more creative the opportunities for using the grounds as a formal learning resource will be, and the more rewarding a learning environment will result. The grounds can be used for the whole spectrum of curriculum subjects, the commitment to which should be reflected in the School Development Plan. In addition, the actual participation in the decision making as well as the carrying out of maintenance and management tasks provides opportunities for children to learn about and understand at first hand the process of landscape and ecological change and the social and practical skills needed to successfully complete such tasks.

The informal curriculum

Increased diversity in the grounds also gives children greater opportunities for more creative and interactive play. The importance of school grounds as both a social and recreational learning resource should not be underestimated, particularly as the opportunities for safe, accessible play outside of the school grounds is often very limited. Furthermore, given the fact that children can spend up to a quarter of their school day in the grounds, the opportunities should not be overlooked.

The hidden curriculum

The 'hidden' curriculum, or cultural context, exerts considerable influence on the attitude and behaviour of children. The way that school grounds are managed and maintained, the way things are 'done' or 'not done' send out signals which frame this cultural context . A caring attitude towards the school grounds, whether by providing for some of the children's needs or by looking after the grounds is seen by children as a reflection of the school's overall understanding of their own needs.

D. Improving wildlife habitats

Children have a right to experience and interact with our native fauna and flora. In a world where opportunities to do this are fast disappearing, where better for children than in school grounds.

There is no reason for school grounds to be sterile and lifeless. By adopting more appropriate and sympathetic maintenance and management practices, a rich and interesting environment can be created. This entails promoting natural diversity where possible, favouring native species rather than ornamental, where opportunities arise for new planting, and avoiding excessive tidiness across the whole site.

There is often an inclination to identify one particular area as a wildlife or environmental area but, in reality, wildlife respects no such boundaries and the whole grounds can provide habitats and opportunities for many types of wildlife. View the whole grounds and consider the whole spectrum of wildlife that could be attracted to the grounds.

References & Organisations

- Titman, W : Special Places; Special People - The Hidden Curriculum of School Grounds, 1994.
- Baines, C and Smart, J : A Guide to Habitat Creation, 1991.

Setting Objectives

E. Thinking globally acting locally

Britain is committed to two major international agendas for sustainable development produced in1992: Local Agenda 21 from the Earth Summit and the European Communities Fifth Environmental Action Programme. Every Local Authority is tasked to integrate sustainable development aims into policies and activities in their area. The involvement of local people is central to the process of achieving real change and your school has a part to play in local initiatives. A key theme under the UK commitment to Agenda 21 is the integration of environmental awareness into education and training at all levels to empower people to take responsibility for their environment.

Local Agenda 21 Conservation and Management objectives include:

- minimising resource use;
- minimising waste production;
- avoiding or minimising pollution;
- reusing or recycling wastes;
- conserving biodiversity; and
- measuring and monitoring the state of the environment.

Practical aspects of how these may apply in the maintenance and management of the school grounds are considered in Section 5 'Maintenance and Management in Practice I'.

Definitions of sustainability

The following definitions illustrate three different perspectives:

'Development which meets the needs of the present without compromising the ability of future generations to meet their own needs' (Bruntland, 'Our Common Future').

'Sustainability implies that human use and enjoyment of the world's natural and cultural resources should not in overall terms diminish or destroy them' (Countryside Commission Position Statement).

'Sustainable development means improving the quality of life while living within the carrying capacity of supporting ecosystems' (World Conservation Union).

References & Organisations

- Cheshire County Council: A Green Guide for Schools, 1992.
- Levett, R : Earth Summit : Rio' 92, Supplement No.2 : Local Agenda 21- A Guide for Local Authorities in the UK.
- Your Local Authority.

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Organisation & Responsibilities

HORNDEAN COMMUNITY SCHOOL

AGENDA

(1) Minutes of previous meeting (dated 19th [illegible] 93)
(2) BTCV involvement
(3) Analysis of pupil questionnaire survey
(4) Results of staff survey to date
(5) [illegible]
(6) AOB

Next Mtg [illegible]

Head, Nesbitt, [illegible]

Pgs. [illegible]

[illegible] Angela 19/11/93

redundancy — to be confirmed on 1 Dec 93

SCHOOL

HORNDEAN CAMPUS

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Organisation & Responsibilities

As already outlined in Section 2, your Landscape Management Plan will be a key organisational tool. It will deal specifically with the stewardship of your school grounds and with the organisation of what needs to be done, where, when and by whom to look after them efficiently and effectively.

A Landscape Management Plan

- Enables planning ahead so that the right management regimes and maintenance operations are carried out at the right time, as often dictated by the seasons.
- Facilitates the prioritising of tasks and resource allocation.
- Clarifies roles and responsibilities. Without a plan there is the potential for confusion over what is to be done, by whom, when and why, especially if key staff leave and are replaced with people who have different methods and intentions. With the division of work often split between contractors and the school community, it is important to be very clear where the boundaries of responsibility lie.

Management options

The landscape maintenance and management operations of the grounds may have traditionally been the responsibility of the head or deputy head, often in conjunction with the site maintenance team in a large secondary school or with the caretaker in most other situations. However, many have decided to designate special responsibility for co-ordinating and overseeing the care of the grounds to a member of staff, with the responsibilities often outlined in his or her job description.

Schools now also require a greater degree of flexibility in the way in which the grounds maintenance is organised and, as a result, grounds may now be maintained in a variety of ways. Which of the following options is chosen will depend on individual circumstances and the degree of flexibility required and are outlined opposite.

- **Using an agent to manage your grounds maintenance.** The outside agent who organises the maintenance tends to be based with the Local Authority Client Services Organisation. The agreement is likely to cover operations such as grass mowing, sports pitch marking, shrub maintenance etc. These tend to be intensive tasks that may require large-scale machinery and mowers. Ensure that you know what is covered by your contract so that you know what to expect to be done and can monitor the performance of the contract.

- **Direct organisation of grounds maintenance by the school - school managed contract.** A school can let a contract, by inviting tenders from private contractors, for the work usually undertaken through the Client Services. However, choosing contractors and following Local Authority Standing Orders is a difficult task. If a teacher, caretaker or bursar, for instance, is given the responsibility for undertaking this, it needs to be part of their job remit and they need to have or learn specific skills, such as tender procedures, producing contract documentation and setting up a contract.

- **Direct organisation of grounds maintenance by the school - school employed grounds staff.** The type of work undertaken by a full or part-time grounds staff can include the care of garden areas, small lawns, habitat management and tasks such as litter picking. However, the brief needs to be firmly established to avoid confusion. The opportunity may exist to share the time of a full-time grounds maintenance officer with another local school, thus establishing links and sharing the cost.

References & Organisations

- Littlewood, M and Wood, J : A Guide to the Maintenance and Management of School Grounds, 1995.

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Organisation & Responsibilities

● **Direct organisation of grounds maintenance by the school - school managed volunteers.** Volunteers can include school neighbours, parents, governors, pupils and staff as part of formal lessons or extra-curricular activities. Careful forward planning is required for tasks such as garden maintenance and wildlife habitat maintenance.

A combination of two or more of the above management options would need to identify different types of agreement for specific areas of work. For instance, large-scale grass cutting under contract whilst the smaller specialist gardening tasks are undertaken by grounds staff, volunteers or a smaller contractor.

The Learning Through Landscapes Trust's publication 'A Guide to the Maintenance and Management of School Grounds' explores the advantages and disadvantages of these different organisational methods in more detail.

Having a flexible working arrangement which accommodates a variety of management and maintenance practices can be efficient and cost effective. It does, however, require clear communication between the relevant parties to reduce the chance of confusion over who does what, or the risk of damage to features by ignorance of their location or value.

Steering groups

Establishing a steering group or core group of people with responsibility for overseeing the grounds can provide an effective way of ensuring good communication between all those involved in the landscape maintenance and management in your school. The group should represent the main interest groups in school, and may include representatives of pupils, staff, governors, supervisory assistants, parents, and possibly the caretaker and community officer, where appropriate. In a small school it is probably appropriate to scale down the size of the group. The sharing of decision-making makes the process more achievable and more enjoyable. Participation also provides an excellent opportunity for developing cross-curricular links.

Establishing the remit of the group is important and it must be clear to all concerned whether the group is acting in an advisory capacity or has delegated powers to make decisions. It is useful to have regular meetings with an agenda and minutes taken for circulation after the meeting. This helps information to be disseminated to the rest of the school and encourages feedback to the group.

Keeping people informed

Sharing the information with people who are not on the steering group is important, to enhance the 'culture of care' within your school. The teaching staff, pupils, governors, caretaker or gardener, supervisory assistants and neighbours should all be kept informed about:

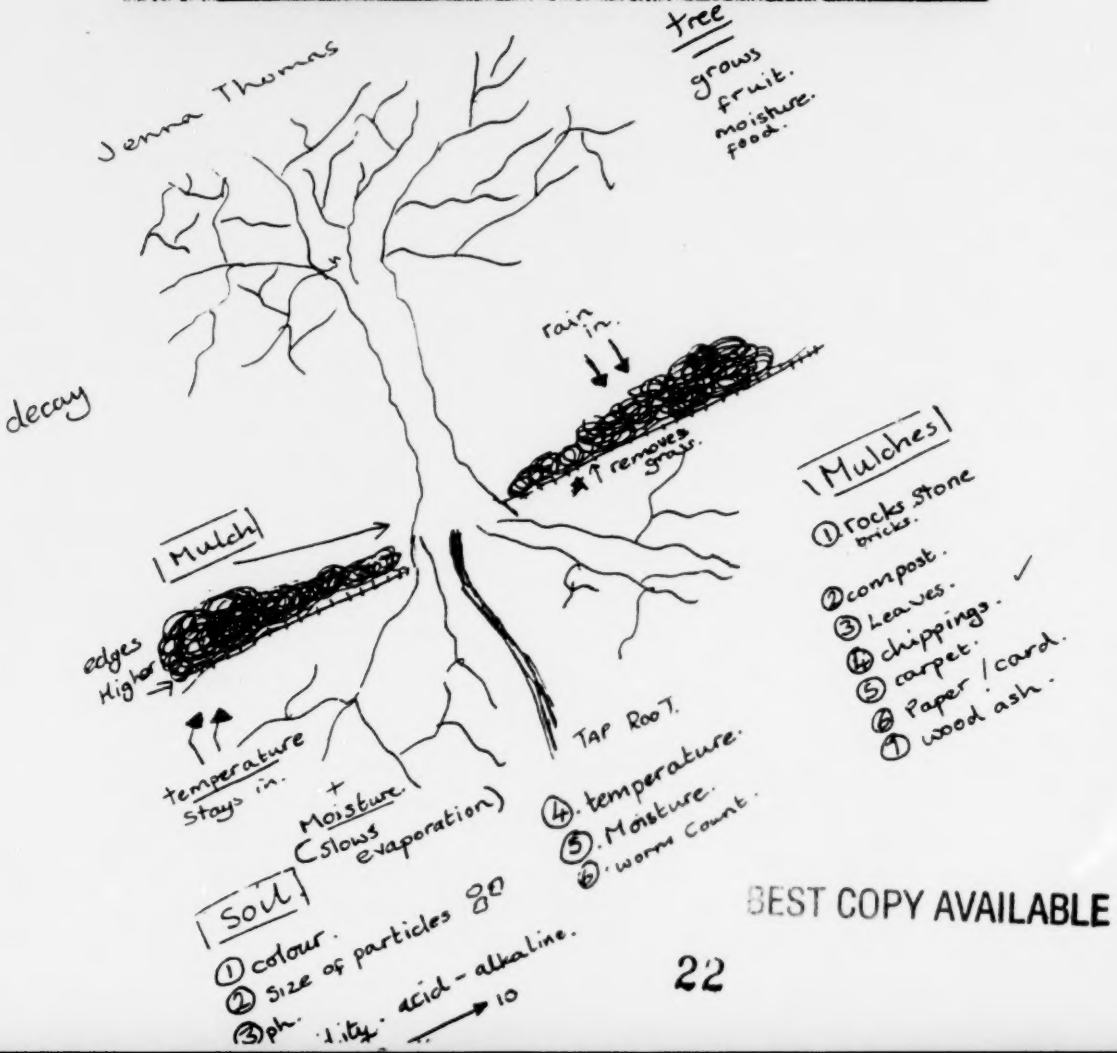
- why things are happening;
- what fund raising activities are proposed;
- when help is needed; and
- what is on the agenda for each steering group meeting as well as what action is decided.

There are a number of ways this can be achieved:

- school assembly;
- school council if you have one;
- school newsletter;
- organising exhibitions of graphic material e.g., plans, sketches, photographs, video material at key stages in the ongoing process; and
- organising open days and inviting parents, neighbours and other community groups to view your plans and proposals.

Keeping everyone informed may take more time but the benefits of establishing the process of consultation and communication can generate wide ranging help and support and can save time in the long run.

Maintenance & Management



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Maintenance & Management in Practice I

All maintenance and management should have a purpose. Understanding the purpose is central to prescribing the right maintenance operations for each area of your grounds. Your Landscape Management Plan defines the purpose by setting down the objectives for your grounds maintenance and management, and it will assist you in prescribing the right style and degree of maintenance for the different areas. The following section first looks at how the objectives described earlier can be put into action.

Working with volunteers

Involving people in practical action in the grounds has many benefits but needs to be considered carefully.

● **Appropriate tasks.** Grounds management does entail a wide range of skills and specialist work is best directed by those with the appropriate level of expertise and judgement and therefore may not be suited to volunteers. It is best not to be over ambitious and, as far as possible, match the scale of work to the capabilities and capacity of the group or individuals. The organisation of volunteers is a skill in itself and bodies such as the British Trust for Conservation Volunteers may be able to advise or support voluntary projects.

● **Safety.** The Health and Safety of people, especially children, working outside needs to be considered. The teacher co-ordinator or a representative from the steering group needs to have up-to-date information and guidelines. Everyone needs to be aware of the risks and to take sensible precautions such as the wearing of rubber gloves when working on ponds and always washing hands after working outside. Knowing the risks and planning against possible incidents, without being too onerous, is advisable.

Management and learning

Looking after the grounds provides many learning opportunities in terms of the practical skills needed and the understanding of the processes of landscape and ecological change.

● **Growing and harvesting.** No matter how small a scale, using the grounds for growing and harvesting is a worthwhile exercise and an effective learning tool. Crops can be grown that include annual fruits, vegetables, grains and flowers which give a quick return, and the seeds from these can be saved for the following year. Longer-term crops such as hazel coppice or willow may provide a potential future source of wood products and materials for design and technology projects.

● **Monitoring change.** Measuring and monitoring the state of the environment can be a valuable educational and promotional tool. Collecting information from the school grounds over years can build up a picture of changes and a greater sense of environmental care. For example, recording the species and extent of lichens sensitive to air pollution or recording height and girth measurements of young trees every year throughout a child's life at the school.

References & Organisations

- Noble, K : Risk Assessment - A Learning Resource Pack, 1995.
- Adams, D., and Dalton, A: Hands - on Conservation - a Volunteers Guide to Practical Conservation, 1994.
- British Trust for Conservation Volunteers (BTCV).

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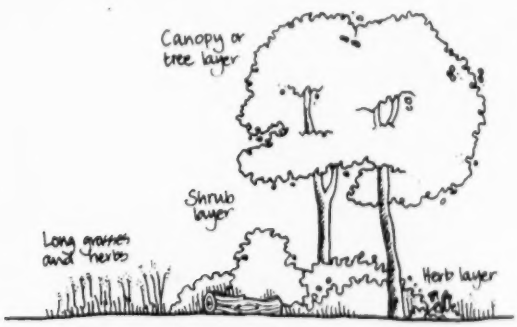
Maintenance & Management in Practice I

Managing for wildlife

The following management principles will help to maximise the wildlife value of your school grounds.

● **Promoting natural diversity.** A rigorous, uniform style of maintenance works against natural diversity. The richest and most varied wildlife habitats occur where there is a range of vegetative structure, for instance the 'woodland edge' habitats that have long grass, herbs, and mixed trees and shrubs. 'Natural diversity' is not just a case of letting the vegetation go wild, but using regular maintenance and special skills to maximise the potential.



A 'woodland edge' managed for natural diversity

● **Favouring native species.** Not surprisingly, the habitat niches and essential food supplies of much of our native fauna is associated with native plants. Exotic and ornamental planting does not provide as rich a habitat for wildlife and does little or nothing to support the complex life cycles of many native species of fauna. Where new planting is being planned for the grounds, consider giving preference to native trees and shrubs, in particular native species which are found locally and thus suited to the soil type and local conditions. Herbaceous native plants are also valuable, so do not invariably treat them as weeds.

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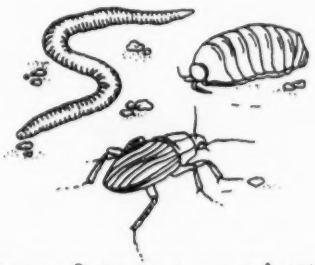
● **Avoiding excessive tidy-mindedness.** A trim, neat, military approach to maintenance will not only cost more but eliminate wildlife from the grounds. Intensive maintenance may be warranted for frontage ornamental planting, but for many other parts of the site it may be a case of over-maintenance. For example, keep some deadwood and leaf litter: decay is part of the life cycle and fallen branches and rotting leaves are a rich habitat for fungi and invertebrates. Another example is grass cutting: by cutting the margins of playing fields less frequently a different sort of grassland community will form, attracting more insects and other invertebrates as well as a wider range of herbaceous and grass species



Invertebrates of deadwood and leaf-litter – part of the natural cycles of decay and regrowth

References & Organisations

• Baines, C and Smart, J : - A Guide to Habitat Creation, 1991.

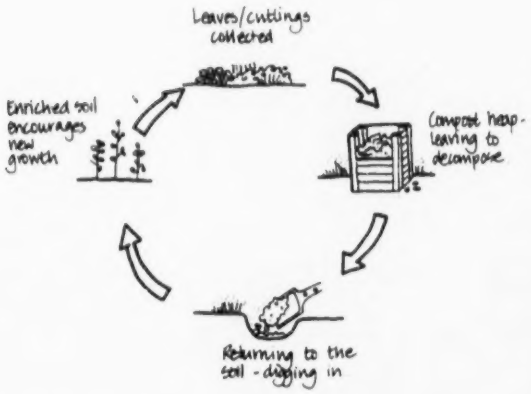
Maintenance & Management in Practice I

Sustainable management

Awareness raising and action for sustainable management can start within the school community and the following are ways these objectives might be applied in the practice of managing your grounds.

- **Minimising input.** Reducing the use of pesticides, fertilisers and fossil energy, in the first instance, can be achieved by not over- maintaining the grounds. Cutting out excessive maintenance can also have the added advantage of reducing costs. For the most part minimising input entails adopting alternative, 'greener' methods of management and directing resources in an appropriate way.

- **Recycling** .Many of the products of grounds maintenance, rather than viewed as waste, such as leaf litter and grass cuttings, can be composted and then used to improve the soil instead of imported fertilisers. Input of herbicides can be reduced by using a mulch around the base of trees and shrubs to limit weed growth. Even better if the mulch can be produced in the grounds from chipped prunings and hedge cuttings. There may be local recycling schemes for other, non-perishable items such as tins and bottles, which can provide a small income to the school.


Leaves/cuttings collected
Compost heap - leaving to decompose
Returning to the soil - digging in
Enriched soil encourages new growth

- **Waste management.** How your school copes with the problem of waste, including litter, is a major issue and one which has no easy solution. Although it is frequently beyond the control of schools to reduce excess packaging, there are times when it is possible to have some power, e.g. a purchasing policy to use recycled paper only. Litter problems in the grounds are best tackled at source. If you have a problem with litter, research where and why it is occuring. For instance, tuck-shops are a common source, and changes to its management may help to resolve the problem: introducing more effective, regular bin clearance or selling products with less packaging.

References & Organisations

- Cheshire County Council: A Green Guide for Schools, 1992.
- Royal Horticultural Society: Conservation & Environment Guidelines - Recycling 1995.
- Scottish Enviromental Education Council: The Stewardship Scheme, 1995.
- Centre for Alternative Technology.
- The Henry Doubleday Research Association.
- The Soil Association.
- TheTidy Britain Group.

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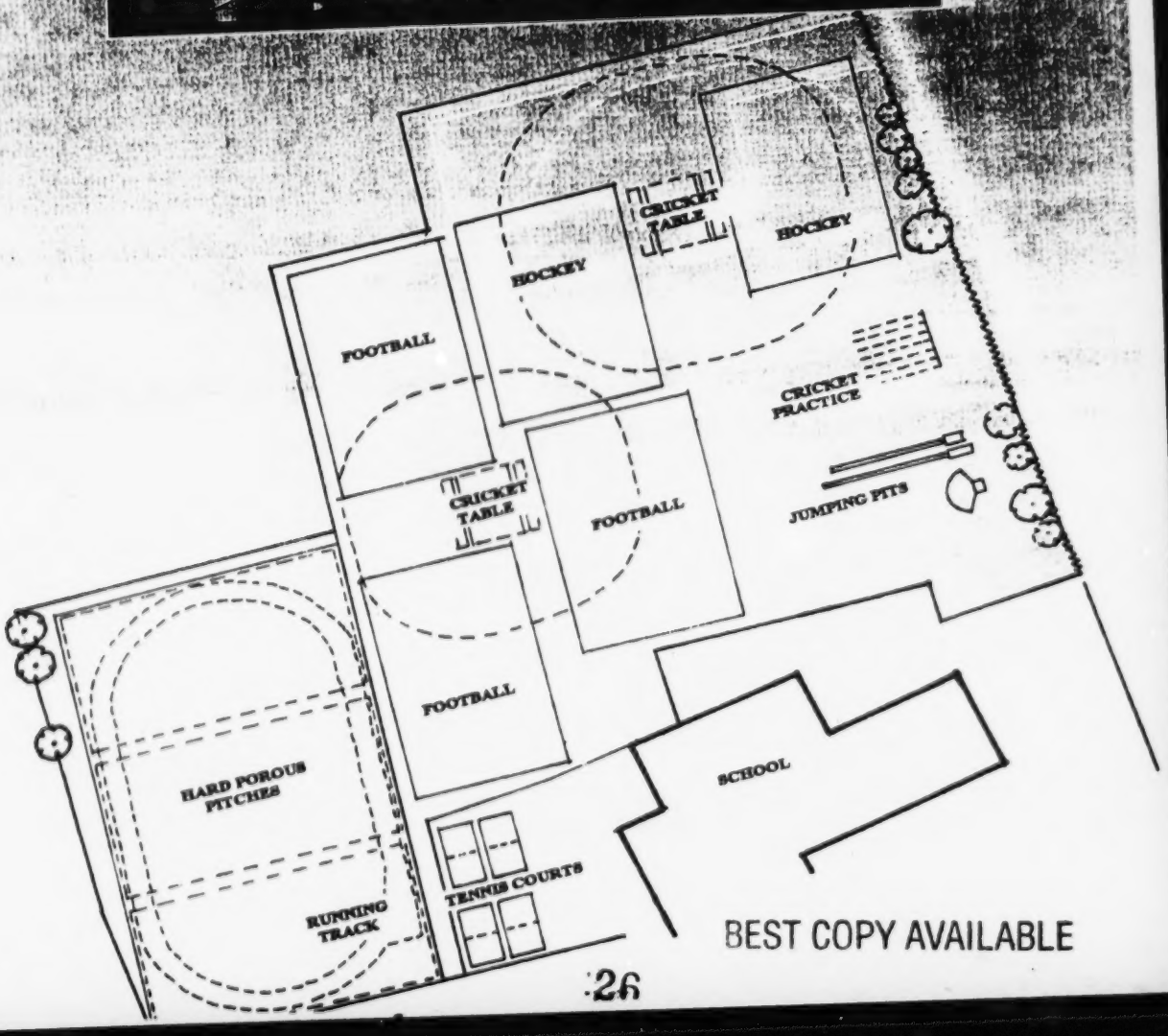
Maintenance & Management

in Practice II



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Maintenance & Management in Practice II

The school grounds should be viewed holistically, not as a collection of unrelated elements. The round of regular maintenance operations should not obscure the longer term management objectives. The individual landscape elements that combine to make up the school grounds as a whole may, however, perform specific functions and have specific maintenance and management requirements. This section therefore looks in greater detail at those requirements.

The landscape elements covered in this section are:

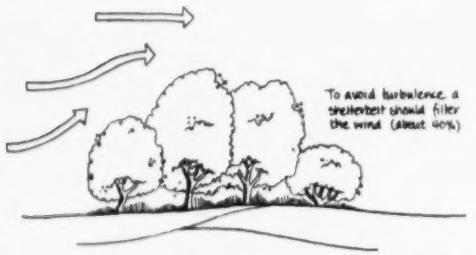
- Trees and shrubs
- Grass areas
- Herbaceous plants and bulbs
- Boundaries
- Ponds
- Site furniture
- Hard surfaces
- Ground markings
- Murals

Vegetation, whether existing or newly planted, individual specimens, or mass woodland-style planting, can be a great asset in school grounds. Not only is it a valuable teaching resource, it can perform vital functions which few other elements in the landscape can effectively provide. The function, or purpose, will often determine the type and level of management required.

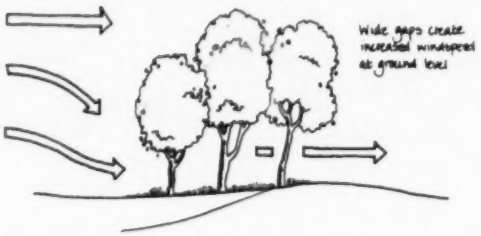
- **Shelter**, which can improve the outdoor experience for the children and also contribute to keeping down the school heating bills by reducing the wind chill factor around the buildings;

- **Screening and enclosure**, which is created by any solid structure above eye level; and

- **Shade**, which is particularly important in the height of summer both on playing fields and in the playground.



An effective shelterbelt will reduce windspeed over a distance 30x the height



Shelter value is often lost through lack of management

References & Organisations

- Baines, C and Smart J : A Guide to Habitat Creation, 1991.
- British Trust for Conservation Volunteers (BTCV).

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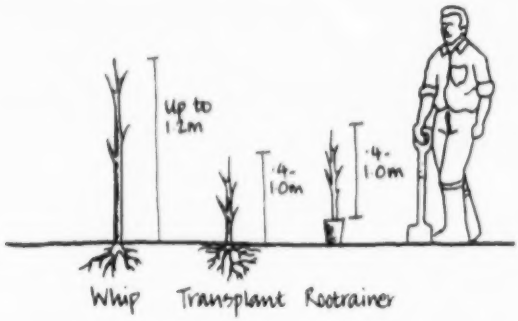
Maintenance & Management in Practice II

Trees & Shrubs

New woodland planting

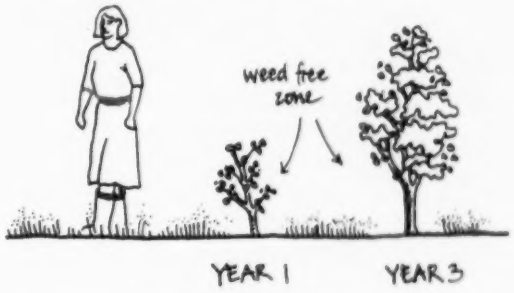
New woodland planting involves using forestry techniques in the mass planting of whips, transplants and root-trainers (see below). When planning to plant new woodland it is important to consider the subsequent maintenance and management requirements. Who plants the trees and shrubs will determine how much input is subsequently required by the school. If the planting has been carried out by contractors, it is likely that they will be responsible for carrying out maintenance tasks including replacing any failures which are not due to vandalism for a set period of time after the planting. However, specific maintenance arrangements must be set up following planting by volunteers. Some of the tasks outlined below are well suited to class activities or volunteer working parties.



For woodland planting to succeed and flourish, maintenance during the early years is critical.

Years 0 - 3
Vital tasks include:

- **Weeding.** The maintenance of a weed-free area around the base of each tree to reduce competition for nutrients and moisture. This can be achieved by hand weeding or by applying herbicides. A metre diameter weed-free area is recommended.
- **Mulching.** The maintenance of a thick layer of bark, or layer of old carpet or black polythene to help suppress weeds as well as retaining moisture. The area to be mulched should be completely cleared of weeds and grass before any mulch is applied. Bark is recommended to be a minimum depth of 75mm.
- **Preventing damage from pests.** The use of plastic shelters or guards may be needed to protect individual new trees from being damaged by rabbits and deer especially if your site is close to open countryside and woodland. Larger areas of tree planting can be protected by rabbit or deer-proof fencing.
- **Checking,** of stakes, ties, and shelters and also refirming plants loosened by frost or wind.



Average growth with good maintenance

Years 3 - 6

All woodland planting tends to be slow to establish, particularly in dry seasons and in poor soils, but growth accelerates from the second season after planting. After the third year, plants are considered to be sufficiently well established to cope with weed growth and generally there is no need for further control of weeds around the base of each plant. Strimming to keep grass short between plants is unnecessary and frequently causes damage to stems.

Average growth with good maintenance

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Maintenance & Management in Practice II

Years 6 -8

After approximately 6-8 years a full canopy is established and at this stage plants begin to compete for light and space. Natural selection takes place by favouring the taller, faster growing species and those most suited to the site conditions and suppressing weaker, slower growing species. At this stage an assessment needs to be made as to the long-term composition of the planting and the original design intentions may have to be modified to take account of the natural selection that has taken place. The planting may require some of the following woodland management practices.

● **Selective thinning.** Individual trees and shrubs are cut down and removed to reduce competition for light, water and nutrients, to give those remaining a greater chance of survival. Woodland plants tend to be planted fairly close together in order to make a visual impact at an early stage. However, once established the plants will be too dense for the long-term health of the woodland.

● **Pruning.** Certain species of trees and shrubs may benefit from pruning. For instance Dogwood and Willow shrub species will thicken from the base if pruned hard. Pruning to lift tree canopies may, be required to improve visibility beneath.

● **Additional planting.** Some unacceptably large gaps may form in the planting because of a number of failures. Before replanting, ensure that the cause of failure is overcome. Initial inappropriate choice of species for the conditions, or waterlogging or compaction of the ground may be responsible.

● **Enhancement planting.** The addition of other plants at this stage may enhance the young woodland. Bulb species, such as Bluebell, Snowdrop and others, as well as herbaceous 'herb layer' species will encourage a more naturalistic woodland.

● **Access.** At this stage access to the 'woodland' needs to be considered. This can entail clearance to create paths or glades into and through the woodland which can be managed as grass paths or surfaced to enable all-weather access.

Traditional woodland management

Interest has been revived in managing woodlands and hedgerows in the traditional ways which once played a major part in rural economies. There may be opportunities for employing skilled people in your school grounds either with existing or new features. Traditional woodland management skills include:

● **Coppicing.** This entails the cyclical removal of stems from certain broad-leaved shrub and tree species, such as Hazel, Dogwood or Willow, to ground level to produce a crop from the regrowth.

References & Organisations

- **Kiser, B : Trees and Aftercare - A Practical Handbook, 1991.**
- **Henry Doubleday Research Association: Weed Control Without Chemicals, 1989.**
- **British Trust for Conservation Volunteers (BTCV).**

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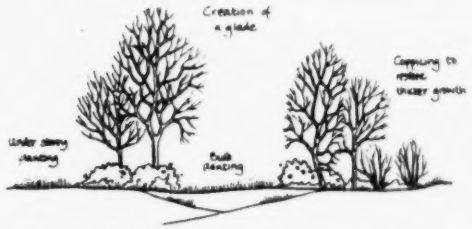
Maintenance & Management in Practice II

● **Pollarding.** As with coppicing, the branches of a tree are removed every few years, but above ground level, and then allowed to regrow to produce a crop. Many native tree species were managed in this way, including Willow, Ash and Oak.

Pollards and coppices survive as ancient features of the countryside. Charcoal, fencing hurdles, basketry, farm tools and numerous other woodcraft items were derived though such techniques. In schools, coppicing or pollarding may be maintained simply for aesthetic or historical interest but there may also be the potential to use wood products in creative ways in art, design and technology projects.



Maturing woodland presents a range of management options

Specimen trees

Individual specimen trees are often planted as standards (see diagram). These trees are expensive and usually occupy a key place in the grounds, especially if they have been planted as a commemorative tree. They have specific maintenance requirements which are critical to their survival and long term health. Even if a tree survives without maintenance during its first few years it will often remain stunted and unattractive.

As well as the regular maintenance tasks such as weeding, mulching and preventing damage from pests, as described under 'new woodland planting', these trees will require additional care to give the tree a head start and encourage rapid growth.

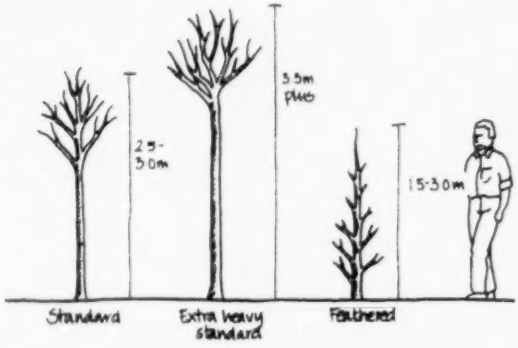
● **Fertiliser.** The most beneficial addition of fertiliser is at the time of planting. An organic fertiliser along with the incorporation of a good mix of topsoil and compost in the tree pit will aid growth most. Thereafter, the application of a tree fertiliser in the top layer of soil around the tree may aid growth but will not be so effective.

● **Protection.** Metal tree guards may be a necessary precaution for trees in vulnerable areas within playgrounds or in vandal-prone situations. A guard will protect a tree from abrasion and bark stripping which could scar it for life.

● **Staking.** All trees planted as individual specimens will require support during the first few years. Stakes and ties need to be checked regularly to ensure the tie does not strangle the tree or that the stake does not rub and disfigure the bark. It is important that once the tree is established the stake and tie should be removed.

● **Watering.** A well-sited tree in good soil and mulched around the base will generally only require watering in drought conditions. When water is applied the soil must be saturated and repeated at regular intervals until the drought ends. Infrequent or inadequate watering is worse than none at all by triggering the tree into active growth when conditions are not favourable.

● **Pruning.** Pruning of the tree's canopy may be necessary to promote the desired form to restore balance to the crown and to thin out weak branches or those obstructing paths. Unwanted side shoots and base growth should also be removed for this reason, as they occur.



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Maintenance & Management in Practice II

Orchards

The appropriate choice of orchard tree varieties and their subsequent management is a major factor for any degree of success. Orchard trees have specific requirements which are distinct from most other trees and generally require more regular attention.

As with 'new woodland planting' and 'specimen trees' successfully establishing new fruit trees depends on regular weeding, mulching, preventing pest damage, checking stakes and ties and watering if necessary. In addition careful pruning is needed.

- **Pruning.** This has to be undertaken throughout the life - time of a fruit tree to achieve and maintain a balanced framework of branches which will carry a good fruit crop. The type and timing of pruning is important and it is advisable to consult a good reference for information about techniques or better still gain advice and a demonstration from a professional grower or local expert.

Mature trees

The management of mature trees in the school grounds should not be forgotten. Healthy trees may need little attention, but old and large trees can become a hazard with disease and decay in their wood if they are not managed. The advice of an arboriculturalist should be sought, if the health or safety of a tree is in question. Your Local Authority should also be able to give advice. They can advise whether any trees have been served with a Tree Preservation Order (TPO). Although a TPO does not dis-allow the management of trees, you may need to notify your Local Authority of any intended management operations.

Where a mature tree has outgrown its location or it is desirable to improve the form of the tree the following pruning operations may be considered:

- **Crown thinning** by the removal of certain branches, can lighten the canopy and allow more light to filter through so casting less dense shade, and can give the tree greater longevity.

Crown raising : removal of lower branches

- **Crown raising** by lopping off the lower branches can make the area around the tree more accessible. This operation may be required for trees adjacent to foot - paths and where more useable shade is required.

- **Crown reduction** by removing outer branches is appropriate where a tree is out- growing the space around it. It can prolong its life and reduce the hazard potential.

Tree surgery work is a highly skilled and difficult operation so it is important to call in the help of a qualified tree surgeon. Consult the Local Authority Arboriculturalist and if necessary obtain a list of qualified tree surgeons in the area. Early action can avoid mishap and save a tree.

References & Organisations

- Arboricultural Association.
- Common Ground.
- Brickell, C. (Royal Horticultural Society) Pruning, 1971.
- Your Local Authority.

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Maintenance & Management in Practice II

Ornamental shrubs

Providing the shrubs were initially chosen with their mature size in mind all they require, as with trees, is a regular programme of weeding, mulching, pest control, feeding and watering (if necessary). Often, however, pruning work will be needed to control the size of a shrub or group of shrubs. This is skilled work and it is important that it is done selectively and at frequent intervals so that the natural shape of the shrubs can be retained. This approach avoids the very harsh appearance which can result from inept pruning, sometimes even carried out with a chainsaw or brush cutter, undertaken once a year. Alternatively, if a shrub outgrows its location it could be replaced with one of a more appropriate size.

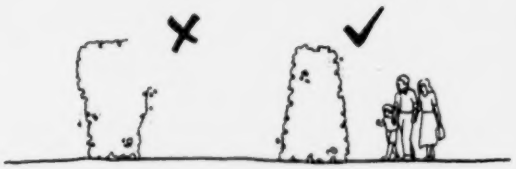
Hedges

The main purpose of the hedges in your grounds will influence the type and frequency of management. The purpose of a hedge may be chiefly aesthetic and form part of the design by defining outdoor spaces. It may, however, serve as a visual screen, shelterbelt, physical barrier or simply a leafy boundary and wildlife resource. The original function of the hedge may no longer be relevant and the feature may now have a different value and context and it is this that will determine the type and standard of maintenance and management. Omitting maintenance can be false economy and a neglected hedge can be very expensive to restore.

Consider the following aspects in assessing future management and maintenance operations:

- **Formal or informal.** A close-cropped hedge can be a significant architectural feature in which the form and geometry of the hedge contributes to the spatial design, and image of the school. On the other hand, in many locations precision pruning may be unnecessary and a more informal appearance equally satisfactory and cost much less.

- **Size and shape.** Hedges are in a constant state of change and often outgrow their position with height and width extending well beyond their intended shape or size. Additional height may not improve screening value and has the disadvantage of a greater loss of light and increased shade. A poorly-shaped hedge will also deteriorate in structure and condition.



Keep hedges at the desired height and maintain with sides tapering to the top

- **Species and structure.** A hedge which consists of plant species not suited to the location and type of hedge will be difficult and unrewarding to manage. Some plants are inappropriate for a low hedge and perform best as a tall screen whilst conversely other plants are ideal when trimmed low but become lank and formless if allowed to grow to a tall hedge. When a new hedge is planned avoid the temptation to use a species simply for rapid establishment. Fast growth can be the bain of ongoing management. The best quality hedges tend to comprise slower growing species which ultimately prove to be more durable, longer living and easier to maintain.

References & Organisations

- Brickell, C. (Royal Horticultural Society) Pruning 1979.
- Brooks, A & Agate, E: Hedging - A Practical Handbook, 1992.

Maintenance & Management in Practice II

● **Age and condition.** The structure and condition of a hedge may have deteriorated through past mis-management or neglect. With age and excessive top growth a hedge becomes gappy and the only solution may be radical action involving pruning back almost to ground level to establish vigorous growth from the base.

● **Traditional hedge laying.** Hedges have traditionally been managed by hedge laying techniques to maintain a stout, traditionally stockproof barrier. Hedge laying has many regional variations in style but the general principle is common to all. Hedges that have become tall and overgrown are cut part-way through at the base of each stem and bent over one another in sequence. Regrowth then emerges from the bent over stems forming a barrier once again from near ground level.

The standard hedge laying technique there are different regional styles

Grass areas

The intensity of use of grass areas is a major consideration in deciding how they are maintained. Various mowing regimes across the grounds may well reflect the varied patterns of use.

Sports pitches

Sports pitches require a high standard of maintenance to ensure a good quality playing surface and a turf that can cope with the intensity of use. However, if play use is not intensive a lower standard of maintenance may be acceptable. Wear and tear to pitches is aggravated by such factors as sub-standard soil conditions and poor drainage. When these are present not only does the pitch become less useable, the cost of maintenance and remedial operations can greatly increase. It is therefore in the longer term interest to keep a pitch in healthy condition.

Some of the tasks needed to keep a quality pitch include:

- regular mowing, usually with gang mowers;
- aerating to prevent compaction from intensive use and thus waterlogging;
- slitting and the incorporation of sand to improve drainage;
- checking of field drainage;
- overseeding worn grass areas;
- stone removal;
- regular applications of fertiliser, and
- weed control.

Consultation with your Client Services Organisation or grounds maintenance officer should be the first step in deciding whether certain operations need to be carried out. In extreme cases a specialist in sportsfield restoration may be required to assess the problems or the potential for upgrading a pitch.

References & Organisations

- Institute of Groundsmanship (IOG).
- Sports Council.

Maintenance & Management in Practice II

Informal grass areas

In many schools a substantial proportion of the grass is not used for team sports but does, nevertheless, serve as an important play and general amenity space. This includes areas which are more difficult to mow such as steep banks and around individual trees. Some of the less intensively used parts of these areas could be cut on a less frequent basis, say four to six times a year, or every other time the sports pitches and intensively used areas are cut. Allowing the grass to grow longer in between cuts in this way can provide greater visual variety and softening of the edges of the grounds. Interesting play features can also be created by such varied mowing, for example, if paths are cut through longer grass.

Meadow areas

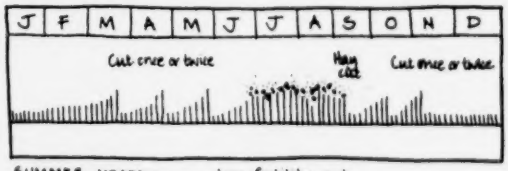
Establishing a flowery meadow is not just a matter of scattering wildflower seeds or leaving an area of normally short mown grass to grow long. It is impossible to match the quality and character of ancient species-rich grassland but a diverse and colourful meadow can be created or an existing sward enhanced provided key principles are followed:

- **Cutting/cropping regime.** Species-rich old meadows are maintained by traditional methods of grazing or cutting for a crop. Well-managed mowing of amenity grass can also attain a species diversity but, as with old meadows, this is totally reliant on continuity of management. The character of a mown meadow will be influenced by timing, frequency and cutting height. With mowing it is generally important to remove cuttings to prevent a build up of fertility which will cause vigorous species to take over..

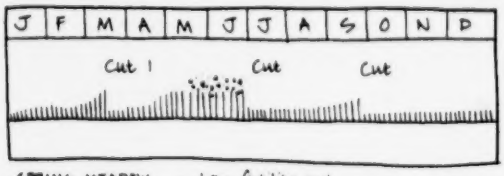
- **Site characteristics.** The soil type, drainage and aspect will influence the ultimate structure and species composition of a meadow. Factors such as whether the ground is chalky or acid, free draining or waterlogged will determine the success and suitability of different grasses and herbs. It is generally much easier to create and sustain a flower rich meadow if the soil fertilty is inherently low (or topsoil has been removed) because there is less opportunity for more vigorous speices such as Rye grass to thrive.

- **Disturbance.** Some plants favour disturbed ground, for example, Docks and Thistles in over-grazed paddocks and Poppies and other arable weeds in cultivated land. Attempts to create a meadow may initially encourage these plants but they can be maintained out of existence over a season or two. Alternatively Poppies, Corn Marigolds, Corncockles etc, can be grown as a colourful, if only short term, feature in their own right.

A meadow will deteriorate and lose its floristic diversity and interest unless there is a commmitment to management.



SUMMER MEADOW – Low fertility soil



SPRING MEADOW – Low fertility soil

References & Organisations

- Baines, C & Smart, J : A Guide to Habitat Creation, 1991.
- English Nature: Flowers in the grass, 1992.
- Seed suppliers, (see references in section 7)

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Maintenance & Management in Practice II

Herbaceous Plants and Bulbs

Herbaceous, or perennial plants are found less often in schools because they are generally shorter lived than shrubby material and demand more maintenance. They require a regular regime of hand-weeding, mulching, feeding and possibly watering if they are to remain healthy and look good. The additional maintenance required includes:

- dead-heading of flowers at the end of the growing season, and for some species during the season too; and
- splitting or dividing of root stock every few years to retain their appearance and vigour.

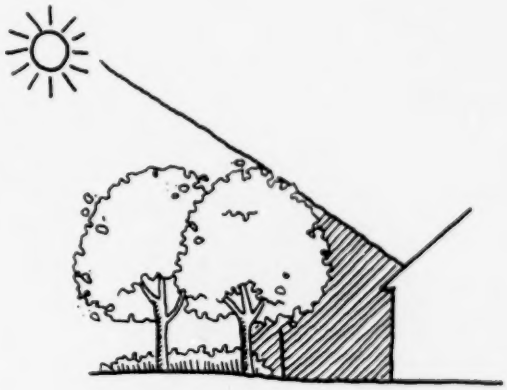
Bulbs tend to decline over time and will need to be replaced at intervals to maintain the effect. Dead-heading can help the bulbs to build up their food stores for next season instead of diverting their energies into seed production. This task could be undertaken as a class activity or by volunteer working parties depending on the scale of bulb planting in your school. Where bulbs are being naturalised in grass it is important not to mow the area for at least six weeks after flowering to allow the foliage to die back naturally.

Boundaries

Where a boundary belongs to a neighbour it is important to allow them access for its upkeep. Retaining good relations with your neighbours and keeping them informed is obviously advantageous, not only to avoid boundary disputes connected with the repair and maintenance of fences and hedges, but also because neighbours can provide additional surveillance and security for the school grounds and building.

Site-specific arrangements are sometimes established for the maintenance of hedges with the school undertaking responsibility of one side of a hedge or both. However these type of arrangements are not ideal and can jeopardise the chances of sustaining a high quality hedge if both parties do not keep up the maintenance.

Boundary trees can be a contentious issue particularly where these are on the south side of small neighbouring gardens and cast a heavy shade. When planning to plant trees around the perimeter of your grounds, either as mass woodland planting or individual trees, be aware of how big some trees can grow and avoid future problems by careful location and species selection. It is best to keep a clear margin along a boundary of a couple of metres wide and not to plant large growing species close to adjoining residential properties.



Ultimately large trees can shade out neighbouring properties if planted too close to the boundary

References & Organisations

- Royal Horticultural Society.
- Your Local Horticultural Society.

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Maintenance & Management in Practice II

Ponds

A well-managed pond can be an attractive and valuable resource for a school. A pond is a living entity, a dynamic and ever-changing ecosystem. Good management is about sustaining a balance of life in a pond. Without management, natural succession will occur and the open areas of water will gradually disappear as vegetation develops through a marshy phase and becomes enveloped by scrub. For an established pond, regular but small-scale maintenance is all that is normally required.

If your school is considering creating a new pond in the grounds the following aspects should be considered in the initial design and construction to avoid problems and make future management easier.

Location

Assess the opportunity for siting the pond where there is a natural catchment for rainwater or the potential for creating it. Avoid heavily shaded areas which will reduce the wildlife interest and create leaf litter which will add to the maintenance problems. Look to the future and consider how big young trees will grow.

Size and shape

Generally the bigger the pond the better. Small ponds are much more likely to require topping up due to more rapid evaporation and will support a less diverse range of pond life. Steep sides are a safety hazard, particularly for young children, whilst gently shelving sides present greater opportunities for establishing marginal and water plants.

Type of construction

Flexible lined ponds using butyl rubber or polyethylene are popular due to lower costs and ease of laying but require hand maintenance because of the risks of puncture. Ponds constructed using puddled clay are only preferable if there is a dependable water source to ensure the clay does not dry out and crack. A well constructed concrete pond or a flexible lined pond with a protective covering of lean mix concrete may prove the most durable.

Water supply

With the realities of metered water supplies an on-site source becomes an important consideration. Piping rainwater run-off from play courts or the school roof should be considered in the initial siting of the pond.

For an established pond the following aspects need to be considered in ongoing maintenance:

Water quality

The nature and quality of pond water will change over the passage of time and with different seasons. This is all part of the fascination of a pond. Newly established ponds will take time to achieve a natural balance and reach a relatively stable condition. Excessive nutrients in the water is the main problem particularly with new ponds. Growth of algae can clog a pond. Repeated raking out and disposal of algae will in time reduce this flush of rapid growth. Another problem can be cloudy water, caused by suspended organisms. An effective way of over coming this can be to anchor a small bundle of barley straw in the water; the straw somehow triggers changes and the water clears.

To prevent contamination from run-off or spray drift, it is advisable to avoid the use of chemicals for weed or pest control anywhere near the pond. Within the pond manual clearance is recommended.

References & Organisations

- Flatt, G: Pond Design Guide for Schools, 1989.
- Probert, C: Pearls in the Landscape - The Conservation & Mangement of Ponds, 1989.

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Maintenance & Management in Practice II

Marginal plants and aquatics

Many of these very rapidly and open water can be reduced to nothing in just a few years. Clearance of pond growth is an inevitable annual task which needs to be incorporated in the school maintenance calendar.

Some plants are far more invasive than than others and can become a maintenance problem. For small ponds avoid introductions such as Reed Mace and Common Reed which will rapidly invade and are difficult to remove. Equally refuse any donations of aliens such as Canadian Pond Weed which tend to clog open water.

Bankside vegetation

Native trees and shrubs in the vicinity of water can enhance the visual and wildlife value of your pond but regular management is important. The bankside vegetation around the pond should not be allowed to cut out vital light or to deposit too much detritus in the pond. Vegetation such as Alder, Dogwood and Willow can be kept in check by periodic coppicing.

Site Furniture

The quality of the site furniture when purchased or constructed will affect not only the attractiveness of the grounds but will also determine the amount of maintenance required. Good quality furniture, although costing more initially, will last longer, look better for longer and probably need less maintenance. More solid and robust furniture will tend also to discourage vandalism.

Timber Fences and Features (Pergolas, Seats ect..)

Where decorative stains have been used to enhance timber features these will need to be repainted at regular intervals according to the manufacturer's instructions. Features which receive a lot of wear, such as seats, may need more frequent re-staining to maintain their appearance and colour.

It is important to remember that wood is a natural material which can move in relation to weather conditions. All timber structures should therefore be checked regularly for splits and splinters and any remedial action undertaken, for instance sanding down or filling of splits or replacement of timbers.

Metal Structures (Seats, Litterbins, Railings etc..)

Repainting will be needed on a regular basis to maintain the integrity of the metal and stop rust deterioration. Powdercoated surfaces do not require such frequent treatment although touching up of damaged areas may be necessary.

Play Equipment

Regular checks for splinters, loose members, splits, security of bolts, security of nets etc., are essential and it is advisable to have a formal arrangement with the installer of the equipment or with your maintenance contractor to ensure the checks are carried out.

References & Organisations

- Littlewood, M. and Wood, J.: A Guide to the Maintenance & Management of School Grounds; 1995.
- National Childrens Play & Recreation Unit: Playground Safety Guidelines, 1992.
- Your Local Authority.

Maintenance & Management in Practice II

Hard Surfaces

Tarmac

You will probably already have an arrangement with your maintenance contractor or caretaker to sweep these areas regularly and keep them free of litter. Regular applications of approved herbicide may also be needed, for example, at junctions with buildings or other surfaces to maintain a tidy, weed free, appearance. When the surface deteriorates over time it may become necessary to resurface with a thin 'topcoat' to recreate a smooth, debris-free surface or, if it is beyond repair, to replace the surface completely.

Synthetic Surfaces

Synthetic play surfaces such as artificial turf will need similar treatment but may need to be hoovered rather than swept depending on the particular type of surface and the manufacturer's recommendations.

Path Gravel and Loose Gravel

Both are natural stone-based materials. Path gravel (sometimes called hoggin) has varied particle sizes to compact into a bound, hard-wearing surface; loose gravel is not compacted and has an even particle size. They both may need to be topped up and the former rolled if the areas are subject to a high level of use. Herbicide treatment may be needed to keep any weed growth in check. It is particularly important to discourage weed growth within path gravel/hoggin to prevent the surface breaking up.

Safety Surfaces

Bark in play areas becomes compacted with use and needs to be checked regularly to see that the depth of bark required by the equipment is being achieved. Depending on the level of use, the bark will need topping up and it is also important to fork over the area regularly to relieve compaction. This will also help to prevent the lower layers of bark remaining wet and rotting down. When these lower layers have to be replaced, the material can be recycled and used as mulch in planting areas. A regular check to ensure that there is no glass or other harmful detritus amongst the bark is advisable.

Rubber surfaces require regular sweeping and checking, as do tarmac and synthetic sports pitches. If small 'pot-holes' form or edges lift it is possible to patch these up, but refer to the manufacturer or the company who installed the surface.

Ground Markings

Sports pitch and games markings on grass will need very regular renewal, often weekly in the height of the growing season and it is likely that the grounds maintenance contractor will carry out this task. On hard play surfaces, pitch and games markings and other more decorative markings may need to be renewed annually, or less frequently, depending on the level of wear and the type of paint used in the initial application.

Murals

Artwork, murals and other decorative markings need to be kept looking fresh and attractive. The frequency at which repainting or touch-up work is needed will depend on a number of factors. If paint has been applied directly onto a brick or concrete block wall the quality of the initial preparation, type of paint and durability of finish will determine how often it is needed. It will also depend on the location of the mural and whether or not it is subject to wear and tear from ball games or from people passing by.

The use of mural 'panels' screwed to walls can ease the burden of maintenance painting and is the preferred option in schools with old, attractive walls. They can be taken down for renovation or renewal without affecting the wall adversely and any maintenance work, such as repointing, can be carried out to the wall at the same time.

References

BTCV

RSPB

ENGLISH NATURE

Organisations & References

ORGANISATIONS

Arboricultural Association
The Stable Block, Ampfield House,
Braishfield, Hampshire SO51 9PA
Tel: 01794 368717

The Arboricultural Association is concerned with arboriculture education, the promotion of safe practices, research and advisory work. It publishes a quarterly journal and a range of advisory booklets on tree planting, pruning, woodland management etc. Details of its membership can also be supplied.

British Trust for Conservation Volunteers (BTCV)
36, St. Mary's Street, Wallingford,
Oxfordshire,OX10 0EU
Tel: 01491 839766

The national charity promoting practical conservation and enabling people from all sections of the community, including schools, to take environmental action.By providing advice, training and equipment volunteers are helped to carry out practical conservation projects e.g. planting native trees and shrubs, installing and developing ponds and management of different habitats.

Common Ground
Seven Dials Warehouse, 44, Earlham
Street, London WC2H 9LA
Tel: 0171 3793109

Common Ground emphasises the importance of people and place, the value of local distinctiveness, and the positive investment people, including schools, can make in their own localities. They run a number of projects and campaigns e.g. to encourage new milestones, the creation of parish maps and the development of new orchards as well as encouraging the maintenance of existing ones.

Council for Environmental Education (CEE)
University of Reading, London Road,
Reading RG1 5AQ
Tel: 01734 756061

The Council for Environmental Education provides a national focus for encouraging and promoting an environmental approach to education at all levels including schools. It undertakes research mainly in partnership with other environmental and educational agencies. It also publishes newsletters, reviews and resource sheets on relevant issues and developments.

Centre for Alternative Technology
Llwyngwern Quarry, Machynlleth,
Powys SY20 9AZ
Tel: 01654 702400

The centre has working displays of alternative energy, organic gardening,and energy conservation. It runs courses for schools and provides a wide range of relevant information and literature.

Groundwork Foundation
9 Holt Court, Aston Science Park,
Jennens Road,
Birmingham, B7 4EG
Tel: 0121 236 8565

Groundwork works very closely with schools and other organisations in 120 towns and cities throughout the country to devise partnership projects which link environmental, social and eonomic regeneration and contribute to sustainable development. Information about individual Groundwork Trusts can be supplied.

Henry Doubleday Research Association (HDRA)
National Centre for Organic Gardening,
Ryton-on-Dunsmore, Coventry CV8 3LG
Tel: 01203 303517

HDRA publishes a great deal of information about organic gardening in general and has a demonstration garden at its headquarters near Coventry. It also sells a range of organic fertilisers, peat substitute composts, safe pesticides, seeds etc.

Institute of Groundsmanship (IoG)
19-23, Church Street, The Agora,
Wolverton, Milton Keynes,
Bucks MK12 5LG
Tel: 01908 312511

The IoG is concerned with education and training and the promotion of high standards of groundmanship.

Landscape Institute
6/7, Barnard Mews, London SW11 1QU
Tel: 0171 738 9166

The Landscape Institute is the professional body representing Landscape Architects, Landscape Managers and Landscape Scientists. It seeks to assist in developing and influencing policy at all levels as it relates to landscape issues; it aims to promote good professional practice and standards and to act as a forum for the exchange of information and ideas through regular publications such as Landscape Design and Landscape Design Extra.

Learning Through Landscapes (LTL)
3rd Floor, Southside Offices,
The Law Courts,
Winchester, SO23 9DL
Tel: 01962 846258

The national charity addressing all aspects of school grounds. It promotes improvements to the environmental quality and educational use of school grounds. It provides information, co-ordinates research and training, publishes books on many aspects of school grounds and runs a wide ranging programme of activities to promote
sustainable developments in school-grounds. Schools can become members of LTL and receive advice on good practice.

National Play Information Centre (NPIC)
1st Floor, 359-361, Euston Road,
London NW1 3AL
Tel: 0171 383 5455

The National Play and Information Centre is a central resourcing agency supported by the Department of National Heritage. It works in partnership with the statutory, voluntary and commercial sectors to develop policy, practice and provision in children's play.

National Playing Fields Association (NPFA)
25, Ovington Square, London SW3 1LQ
Tel: 0171 584 6445

This organisation campaigns to acquire, protect and improve playing fields and playgrounds.

Royal Horticultural Society (RHS)
The Royal Horticultural Society's Garden,
Wisley, Woking, Surrey GU23 6QB
Tel: 01483 224234

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Organisations & References

ORGANISATIONS

The RHS is one of the most important horticultural organisations in the world which has a commitment to educate, advise and inspire gardeners. It is particularly committed to encouraging and motivating young gardeners in schools. It carries out research and publishes information, and has a number of demonstration gardens around the country.

Royal Society for Nature Conservation (RSNC) The Wildlife Partnership
The Green, Witham Park, Waterside South, Lincoln LN5 7JR
Tel: 01522 544400

The RSNC is the umbrella organisation for Widlife Trusts throughout the country. Local trusts are involved in practical conservation work and can often provide help to schools. WATCH is the junior section of the RSNC.

Royal Society for the Protection of Birds (RSPB)
The Lodge, Sandy,
Bedfordshire.SG19 2DL
Tel: 01767 680551

The RSPB is committed to protecting all wild birds and their habitats. It is similarly committed to environmental education and encouraging young people to take an interest in the environment, conservation and management for wildlife. It also produces a range of curriculum linked information packs. YOC is the junior section of the RSPB.

Soil Association
86, Colston Street, Bristol, BS1 5BB
Tel: 0117 929 0661

The Soil Association promotes sustainable relationships between the soil, plants, animals, people and the biosphere, in order to produce healthy food and other products while protecting and enhancing the environment. It undertakes research, publishes a magazine called 'Living Earth' and there are local groups which can be contacted through the head office in Bristol.

Sports Council
Upper Woburn Place, London WC1H 0QP
Tel: 0171 3881277

The Sports Council provides information and advice on good practice through its network of regional offices.

Tidy Britian Group,
The Pier, Wigan WN3 4EX
Tel: 01942 824620

The Tidy Britian Group is the national agency for litter abatemant and produces a range of information which is relevant to schools. A free catalogue is available.

Local contacts:
The above organisations may have an office or representative in your local area. It is worth contacting your Local Authority for information about local schemes, e.g. demonstration gardens, tree warden and ranger schemes.

REFERENCES

Adams, D. and Dalton, A.: Hands - on Conservation: A Volunteer's Guide to Practical Skills, 1994
BTCV Enterprises, Conservation Centre, Balby Road, Doncaster, DN4 ORH
Tel: 01302 859522

This pack comprises 20 leaflets providing simple 'How to' instructions for a range of conservation activities, including laying hedges, coppicing, managing ponds etc. There is also a leaflet on basic safety issues.

Baines, C and Smart, J: A Guide to Habitat Creation, 1991
Packard Publishing Limited
ISBN 1 85341 031 4

A pocket-size guide to the creation and restoration of all types of habitat - grasslands, woodlands, wetlands and wastelands. The text is clear and readable and is accompanied by good practical illustrations. Each chapter has its own list of selected further reading and there is a general bibliography at the end. There are also lists of species suitable for establishment in each of the habitats considered.

Brickell,C (Royal Horticultural Society): Pruning, 1979
Mitchell Beazley Publishers Ltd.
ISBN 0 85533 145

This publication uses clear step-by-step diagrams to illustrate the basic principles and methods for pruning ornamental plants including shrubs, climbers and fruit trees. The booklet forms a part of the Royal Horticulture Society's practical and comprehensive garden encyclopedia. Other titles in this series include 'Plant Propagation', 'Vegetables','Fruit', 'Garden Pests and Diseases' and 'Gardening Techniques'.

Brooks,A and Agate,E: Hedging-A Practical Handbook,1992
British Trust for Conservation Volunteers, 36, St. Mary's Street, Wallingford, Oxfordshire, OX1 0EU.
Tel: 01491 839766
ISBN 0 946752 02 8

A readable guide which considers how to plant and look after hedges in order to maintain them in good health. A range of other issues are also considered such as the history of hedges, legal aspects, safety and the organisation of volunteers. The book also includes information about specialist associations, courses, competitions, and relevant organisations.

Cheshire County Council: A Green Guide for Schools, 1992
Cheshire County Council, County Hall, Chester, CH1 1SQ
Tel: 01244 603164
ISBN 0 904431 86

This A4 booklet considers the concepts which guide and inform sustainable management practices in school grounds as well as more generally in schools. There are useful suggestions for action relating to green issues such as the recycling of litter and rubbish including arisings from grounds maintenance and gardening, and generally minimising the use of pesticides and herbicides during maintenance operations.

Community Design for Gwent-Ground Rules, 1994
Community Design for Gwent, Pill Box Hall, Church Street, Newport,

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Organisations & References

REFERENCES

Gwent NP9 2BY
Tel 01633 250271

Ground Rules provides practical guidelines to help schools to plan successful new uses and improvements to their site. It stresses the value of involving the whole school and has a number of useful, photocopiable A4 record sheets for undertaking a review of the aesthetic and physical qualities of the school landscape, how the site is used (including curriculum work), and current management and maintenance practices.

Council for Environmental Education: Develop an Environmental Policy - A Call to Action for Schools, 1995
CEE, University of Reading, London Road, Reading RG1 5AQ
Tel: 01734 756061

This six-page pamphlet challenges schools to include an environmental policy within their School Development Plan. It offers a useful checklist of many of the positive actions a school can take and has been produced in partnership with a number of other organisations including the RSPB, Learning Through Landscapes, The Wildlife Trusts and the Field Studies Council.

Department of Education and Science: Playing Fields and Hard Surface Areas, Building Bulletin 28, 1982
HMSO Publications Centre, PO Box 276, London SW8 5DT
Tel: 0171 8739090
ISBN 0 11 270310 0

This document was published to assist with the interpretation and explanation of the Education (School Premises) Regulations, 1981. It is now out of print but remains a useful reference for information about sports pitch and court sizes and configurations. It also has a useful bibliography. The Department for Education and Employment has recently (July 1995) published a revised set of School Premises Regulations in draft for consultation and these are currently being considered by Parliament.

Emoorsgate Seeds: British Wildflower and Wild Grass Seeds for Creative Conservation and Landscape Restoration, 1995
Emoorsgate Seeds, Market Lane, Terrington St. Clement, Kings Lynn, Norfolk PE34 4HR.
Tel: 01553 829028

This booklet identifies an initial list of questions that are referenced to each of the twenty sections into which the manual is divided, including planning, sowing, fertility, seed mixes, establishment and management. There is a helpful diagram summarising appropriate management regime as well as an interesting table comparing the costs of managing amenity and meadow type grasslands.

English Nature: Flowers in the Grass, 1992
English Nature, Northminster House, Peterborough, PE1 1AU.
Tel: 01733 340345
ISBN 1 85716 039 8

Flowers in the Grass explains basic principles and is realistic about what can be achieved and successfully maintained. It describes how new flowery grasslands can be created either from bare ground or from regularly mown grass areas and the type of management regimes which might be considered. It considers plant species, seed mixes, soils and plant associations and there is a guide to identifying the common grasses.

Flatt, G: Pond Design Guide for Schools, 1989
Hampshire Books, Biblios, Star Road, Partridge Green, West Sussex, RH13 8LD.
Tel: 01403 711143
ISBN 1 870 651 227

This practical guide identifies the important issues in pond construction which are essential for achieving a sustainable school wetland habitat. A pond maintenance plan is also included and against each task eg. clearing excess growth, the equipment and the suggested method of tackling the task is set out, together with the frequency at which that task should be carried out. The publication also includes a list of useful publications.

Henry Doubleday Research Association: Weed Control without Chemicals, 1989
HDRA, National Centre for Organic Gardening, Ryton-on-Dunsmore, Coventry CV8 3LG
Tel: 01203 303517

This is an informative leaflet on the ecology of weeds and how to tackle the most troublesome ones.

Johnsons Seeds: Wildflower Manual, 1991
Johnsons Seeds, London Road, Boston, Lincolnshire PE21 8AD
Tel: 01205 365051

This catalogue has useful text which describes the establishment and management of wildflower and wild grass seeds as well as considering techniques for seeding and providing details of native seed production. This is set within the wider context of issues affecting semi-natural grasslands in the British countryside.

Kiser,B: Trees and Aftercare - A Practical Handbook, 1991
British Trust for Conservation Volunteers, 36, St. Mary's Street, Wallingford, Oxfordshire, OX10 0EU
Tel: 01491 839766
ISBN 0 946752 07 9

A practical guide which considers the planting and and early care of trees e.g. weeding, mulching etc. as well as the longer-term management issues e.g. pruning, diseases, coppicing, pollarding, legal aspects, safety etc. This forms part of an overall look at trees including more general issues of trees within the landscape, including the planting ,design and management of trees for shelter, soil stabilisation, wildlife value, noise reduction, improving air quality, and for general amenity interest. Other issues which are considered include using and organising volunteer workers (Appendix A) and there is a useful list of relevant organisations, an extensive bibliography and glossary of technical terms.

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Organisations & References

REFERENCES

Levett, R : Earth Summit : Rio '92, Supplement No.2 : Local Agenda 21 - A Guide for Local Authorities in the UK
LGMB Publications Dept., Arndale House, Arndale Centre, Luton, LU1 2TS

Agenda 21 is the outcome of the United Nations Conference on Environment and Development (the Earth Summit) held in Rio de Janeiro in January, 1992 It is the key text for all those concerned with sustainability policy and practice and attempts to specify what actions will be needed throughout the world to reconcile development with environmental concerns The whole document is lengthy and complex and a useful summary has been produced by the Local Government Management Board to help local authorities make the best use of Agenda 21.

Littlewood, M. and Wood, J. : A Guide to the Maintenance and Management of School Grounds, 1995
Biblios, Star Road, Partridge Green, West Sussex RH13 8LD.
Tel: 01403 711143
ISBN 1 872865 127

This is a new publication from Learning Through Landscapes which provides a comprehensive introduction for governors and school managers. It considers the organisation of maintenance, the reviewing of existing arrangements, different management options and planning for the future. Interesting case studies are also provided together with a list of useful organisations and reference material.

National Children's Play and Recreation Unit: Playground Safety Guidelines, 1992
NCPRU,359-361 Euston Road, London NW1 3AL.
Tel: 0171 3835455

Although primarily concerned with play areas other than in school grounds, this A4 booklet provides valuable advice for teachers and governors. These issues include legal responsibilities, standards, planning for safe play, siting and installing equipment, inspection and maintenance, vandalism and dogs.

Noble, K : Risk Assessment- A Learning Resource Pack, 1995
British Trust for Conservation Volunteers Enterprises, Conservation Centre, Balby Road, Doncaster, DN4 0RH.
Tel: 01302 859522

This is a short booklet developed from a one-day training course designed for BTCV staff and volunteers. It has useful information about responsibilities for risk assessment under the 1992 Management of Health and Safety at Work regulations.

OFSTED (1995)
The Annual Report of Her Majesty's Chief Inspector of Schools, Standards and Quality in Education 1994/95
HMSO Publications Centre, PO Box 276, London SW8 5DT.
Tel: 0171 8739090

Probert, C : Pearls in the Landscape-The Conservation and Management of Ponds, 1989
Farming Press
ISBN 0 85236 198X

This is a very practical guide which covers pond ecology, design, construction, restoration and management. It also has a useful 'species-to-plant' table.

Royal Horticultural Society: Conservation and Environment Guidelines - Recycling, 1995
RHS,Wisley, Woking, Surrey, GU23 6QB
Tel: 01483 224234

This leaflet summarises the opportunities gardeners have for recycling waste material and in particular, composting plant and vegetable matter. It highlights the importance of compost for soil health and fertility and recommends thoughtful recycling as a positive means of protecting and improving the natural environment.

Scottish Environmental Education Council: The Stewardship Scheme, 1995
Scottish Environmental Education Council, University of Stirling, Stirling, FK9 4LA
Tel:01786 467865
ISBN 0 948773 18 9

The Stewardship Scheme is published in a ring binder and considers issues such as recycling, litter and the use of sustainable materials within the broader context of sustainable management in schools and life generally.It has useful ideas and a practical format for carrying out an environmental audit. It also has an excellent and very comprehensive resource directory, many useful general references and list of organisations to contact.

Titman,W : Special Places; Special People - The Hidden Curriculum of School Grounds, 1994
WWF, Learning Through Landscapes Trust and Southgate Publishers, Biblios, Star Road, Partridge Green, RH13 8LD
Tel: 01403 711143
ISBN 0 947613 48 X

This fascinating publication is based upon a two year research project which identifies how children 'read' environments and how the messages and meanings conveyed by the design and management of school grounds constitutes a 'Hidden Curriculum'. By implication these meanings and messages can be altered by making changes to the design and to the management regimes which can in turn lead to overall benefits.

Wood, J, Lucas, B. and Grace, M : Esso Schoolwatch - Survey, 1992
Learning Through Landscapes Trust, 3rd Floor, Southside Offices, The Law Courts, Winchester, SO23 9DL
Tel: 01962 846258

A package of data - collection sheets to help schools undertake a detailed, long - term, survey of their grounds.

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